# CD Radio Cassette-Corder 

Operating Instructions

## CFD-E55

## Warning

## To prevent fire or shock hazard, do not expose the player to rain or moisture.



This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.


This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

## CAUTION

The use of optical instruments with this product will increase eye hazard.

## WARNING

Do not install the appliance in a confined space, such as a bookcase or built-in cabinet.

## For customers in Canada

To prevent electric shock, match wide blade of plug to wide slot, fully insert.

## Information

## For customers in the United States

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
-Reorient or relocate the receiving antenna.
-Increase the separation between the equipment and receiver.
-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-Consult the dealer or an experienced radio/TV technician for help.
You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

## Ow ner's Record

The model number is located at the bottom and the serial number is located in the battery compartment.
Record the serial number in the space provided below. Refer to these numbers whenever you call upon your Sony dealer regarding this product.

Model No. CFD-E55
Serial No.

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## Playing a CD



Connect the supplied AC power cord (see page 26 ).
Press $\boldsymbol{P}$ PUSH OPEN/CLOSE down to open the CD compartment and place the CD on the CD compartment.


With the label side up
2
Close the lid of the $C D$ compartment.


3


## Press II

The player turns on (direct power-on) and plays all the tracks once.

Display


Track number Playing time

## Tip

Next time you want to listen to a CD, just press -IIThe player turns on automatically and starts playing the CD.

## Use these buttons for additional operations



| To | Press |
| :--- | :--- |
| adjust the volume | VOL,+- |
| stop playback | ■ |
| pause playback | Press the button again to <br> resume play after pause. |
| go to the next track | $\mathbf{N}$ |
| go back to the previous track | $\mathbf{1 4 4}$ |
| remove the CD | $\boldsymbol{\Delta}$ PUSH OPEN/CLOSE |
| turn on/off the player | POWER |

## Listening to the radio



Connect the supplied AC power cord (see page 26).


Press RADIO BAND until the band you want appears in the display (direct power-on).

Display
8 Mm 50

2


Hold down TUNE TIME SET + or - until the frequency digits begin to change in the display.
The player automatically scans the radio frequencies and stops

Indicates an FM stereo broadcast

when it finds a clear station.
If you can't tune in a station, press the button repeatedly to change the frequency step by step.

## Tips

- If the FM broadcast is noisy, press PLAY MODE •MONO/ST ISS until "Mono" appears in the display and the radio will play in monaural.
- Next time you want to listen to the radio, just press RADIO BAND. The player turns on automatically and starts playing the previous station.


## Use these buttons for additional operations



| To | Press |
| :--- | :--- |
| adjust the volume | VOL,+- |
| turn on/off the radio | POWER |

## To improve broadcast reception

Reorient the antenna for FM. Reorient the player itself for AM.

for FM

for AM

## Playing a tape



Connect the supplied AC power cord (see page 26 ).

1


Press ■ - to open the tape compartment and insert a recorded tape. Use TYPE I (normal) tape only. Close the compartment.


With the side you want to play facing you

2
 Press

The player turns on (direct power-on) and starts playing.

Display


## Tip

Next time you want to listen to a tape, just press The player turns on automatically and starts playing the tape.

## Use these buttons for additional operations



| To | Press |
| :--- | :--- |
| adjust the volume | VOL,+- |
| stop playback | an |
| fast-forward or rewind the tape | or $\boldsymbol{4} \mathbf{4}$ |
| pause playback | II <br> Press the button again to <br> resume play after pause. |
| eject the cassette | ■ |
| turn on/off the player | POWER |

## Recording on a tape



Connect the supplied AC power cord (see page 26).


Press ■-to open the tape compartment and insert a blank tape. Use TYPE I (normal) tape only.


2


Select the program source you want to record.

To record from the CD player, insert a CD (see page 4) and press ■on the CD section.

To record from the radio, tune in the station you want (see page 6).

Display

1 II EAT
FM 892

( is depressed automatically).

## Tips

- Adjusting the volume or the audio emphasis (see page 27) will not affect the recording level.
- If the AM program makes a whistling sound after you've pressed ©in step 3, press PLAY MODE $\cdot$ MONO/ST ISS (Interference Suppress switch) repeatedly until the noise is at a minimum.
- For the best results, use the AC power as a power source.
- To erase a recording, proceed as follows:
1 Insert the tape whose recording you want to erase.


## Use these buttons for additional operations



| To | Press |
| :--- | :--- |
| stop recording | $\boldsymbol{\square} \boldsymbol{=}$ |
| pause recording | II |
|  | Press the button again to <br> resume recording. |
| turn on/off the player | POWER |

## Using the display

You can check information about the CD using the display.


## Checking the total track number and playing time

Press DSPL ENT MEM in stop mode.
If the CD has more than 12 tracks, "OVER 12" appears in the display.


## Checking the remaining time

Press DSPL ENT MEM while playing a CD.
The track numbers in the music calendar disappear after they are played.

| To display | Press DSPL ENT MEM |
| :--- | :--- |
| the current track number <br> and the remaining time <br> on the current track* | once |
| the number of tracks left <br> and remaining time on the CD | twice |
| the current track number <br> and playing time | three times |

* For a track whose number is more than 20, the remaining
time appears as "--:--".


## Locating a specific point in a track

You can quickly find a specific point in a track while playing a CD.


| To locate | Press |
| :--- | :--- |
| a point while listening to <br> the sound | (backward) while playing <br> and hold down until you <br> find the point |
| a point while observing | (forward) or $\mathbf{1} \mathbf{~} \mathbf{4}$ <br> (backward) in pause and <br> hold down until you find <br> the point |

## Playing tracks repeatedly

(Repeat Play)

You can play tracks repeatedly in normal, shuffle or program play modes (see pages 15-17).


Press $\quad$.
"Cd" appears in the display.
2 Proceed as follows.

| To repeat | Do this |
| :---: | :---: |
| a single track | 1 Press PLAY MODE• <br> MONO/ST ISS until "REP 1 " appears. <br> 2 Press $\mathbf{1 < 4}$ or $\rightarrow$ to select the track that you want to repeat. <br> 3 Press III. |
| all the tracks | 1 Press PLAY MODE• <br> MONO/ST ISS until "REP <br> ALL" appears. <br> 2 Press 1 II. |
| tracks in random order | 1 Press PLAY MODE• <br> MONO/ST ISS until <br> "SHUF REP" appears. <br> 2 Press III. |
| programmed tracks | 1 Press PLAY MODE• <br> MONO/ST ISS until <br> "PGM REP" appears. <br> 2 Program tracks (see step 3 on page 16). <br> 3 Press III. |

## To cancel Repeat Play

Press PLAY MODE•MONO/ST ISS until "REP" disappears from the display.

# Playing tracks in random order (Shuffle Play) 

You can play tracks in random order.


1 Press $\quad$.
"Cd" appears in the display.
2 Press PLAY MODE •MONO/ST ISS until "SHUF" appears in the display.
3 Press II to start shuffle play.

## To cancel Shuffle Play

Press PLAY MODE•MONO/ST ISS until "SHUF" disappears from the display.

## Creating your own program

 (Program Play)You can arrange the playing order of up to 20 tracks on a CD.


1
Press $\quad$.
"Cd" appears in the display.
2 Press PLAY MODE •MONO/ST ISS until "PGM" appears in the display.
3 Press the $1 \mathbf{1 4}$ or $\rightarrow$ then press DSPL ENT MEM for the tracks you want to program in the order you want.

Programed track


Playing order

The programed tracks appear in the music calender.
4 Press II to start program play.

## Tips

- You can play the same program again, since the program is saved until you open the CD compartment.
- You can record your own program. After you've created the program, insert a blank tape and press to start recording.


## To cancel Program Play

Press PLAY MODE • MONO/ST ISS until "PGM" disappears from the display.

## To check the order of tracks before play Press DSPL ENT MEM.

Every time you press the button, the track number appears in the programed order.

## To change the current program

Press $\square$ once if the CD is stopped and twice if the CD is playing. The current program will be erased. Then create a new program following the programing procedure.

## Presetting radio stations

You can store radio stations into the player's memory. You can preset up to 20 radio stations, 10 for each band in any order.


1 Press RADIO BAND until the band you want appears in the display.
2 Hold down AUTO PRESET for 2 seconds until "AUTO" appears in the display.
The stations are stored in memory from the lower frequencies to the higher ones.

## If a station cannot be preset automatically

You need to preset a station with a weak signal manually.
1 Press RADIO BAND to select the band.
2 Tune in a station you want.
3 Hold down DSPL ENT MEM for 2 seconds.
4 Press PRESET + or - until the preset number ( 1 to 10) you want for the station flashes in the music calender.

## 5 Press DSPL ENT MEM.

The new station replaces the old one.

# Playing preset radio stations 

Once you've preset the stations, use PRESET + or - to tune in to your favorite stations.


1 Press RADIO BAND to select the band.
2 Press PRESET + or - to tune in the stored station.

## Setting the clock

"- -:--" indication appears in the display until you set the clock.


## Tip

The time display system:
12-hour system AM 12:00 = midnight
PM 12:00 $=$ noon

Before you set the clock, connect the power source (see page 26).

1 Press CLOCK for 2 seconds until the hour digit flashes.


2 Press TUNE TIME SET + or - until you set the current hour. Then press DSPL ENT MEM.
The minute digits flash. Set the minutes by pressing TUNE TIME SET + or - until the correct minute is displayed.


3
Press DSPL ENT MEM.
The clock starts from 00 seconds.

## Waking up to music

You can wake up to music or a radio program at a preset time. Make sure you have set the clock ("Setting the clock" on page 20).


Before you begin, make sure the $\Theta$ (clock) indication is not lit in the display. If it is lit, press STANDBY.

1 Prepare the music source you want to play.

| To play | Do this |
| :--- | :--- |
| the radio | Tune in a station |
| a CD | Insert a CD |

2 Press TIMER.
The $\Theta$ (clock) and the music source (" Cd " or "RAdIO") flash.
3 Select the music source ("Cd" or "RAdIO") by pressing TUNE TIME SET + or -, then DSPL ENT MEM.
4 Set the timer to the hour you want the music to start by pressing TUNE TIME SET + or - , then DSPL ENT MEM.


Set the minutes, then press DSPL ENT MEM.
5 Set the timer to the hour and the minutes you want the music to go off. (Do as step 4.)

## Tips

- To exit the standby mode, press STANDBY to make ©disappear from the display.
- The preset settings remain until you reset them.


## Note

When you press or - button of the tape player in the timer mode:
If the tape length of one side is longer than the set time, the player will be turned off at the end of the tape, not at the set time.

6 Press TUNE TIME SET + or - to set the volume, then DSPL ENT MEM.


7 Press STANDBY.
The Uindication lights up and the power goes off.
At the preset time, the power will go on, and the music will play. Then the power will go off at the preset time, and the player will enter into the standby mode.

## To check/change when the playback will start

 Press TIMER, then DSPL ENT MEM. Each time you press DSPL ENT MEM, a stored setting is displayed in the set order. To change the setting, display the setting you want to change and re-enter it.
## To use the player before a timer playback starts

Just turn on the player, and then you can use it.
If you turn off the player before the preset time, timer playback will start at the preset time.
In case of the radio, however, if you listen to the station which is different from the one you tuned in in step 1 on page 21, you will hear that station at the preset time. Make sure to tune in the station you want to listen to before you turn off the player.

## To stop play

Press POWER to turn off the power.

## Falling asleep to music

You can set the player to turn off automatically after $10,20,30,60,90$, and 120 minutes, allowing you to fall asleep while listening to music.


## Tip

- You can fall asleep and wake up to different music. Set the waking up timer first (see page 21), turn on the power, and then set the sleeping timer. However, you cannot store different radio stations.
- You can set different volume for the waking up timer and the sleeping timer. For instance, you can sleep at lower volume and wake up at higher volume.


## Note

When you are playing a tape using this function:
If the tape length of one side is longer than the set time, the player will not go off until the tape reaches the end.

## Using the <br> countdown timer

You can set the player to sound music or beep after a preset period of time, which is useful as a kitchen timer, etc.


1 Press ALARM.
The time display flashes.


2 Press TUNE TIME SET + or - to display the time (1 to 60 minutes) for the alarm and press DSPL ENT MEM.
3 Press TUNE TIME SET + or - to select the sound for the alarm by and press DSPL ENT MEM.

| Display | Sound for alarm |
| :--- | :--- |
| bEEP | beep |
| MUSIC | "La primavera (Spring)" from |
|  | "Le Quattro Stagioni |
|  | (The Four Seasons)" by Vivaldi |

4 Press TUNE TIME SET + or - to select the volume of the sound and press DSPL ENT MEM.

| Display | Volume |
| :--- | :--- |
| LO | low |
| HI | high |

## Tip

Because the settings are stored, you can turn on the countdown timer simply by pressing START/ STOP.
To change the setting, set the item first and then press START/ STOP. Be sure that the ALARM lamp is lit.

5 Press START/STOP to turn on the countdown timer.

The ALARM indicator lights up and the countdown timer starts to count down the time.

After the preset period of time, the alarm will sound for about 20 seconds.

## To stop the alarm

Press START/STOP.

## Choosing the power sources

You can use the AC power or batteries as a power source.


2 to a wall outlet

## Note

Before you replace the batteries, be sure to take out the CD from the player.

## Tip

When the AC power cord is disconnected and the batteries for the player are not inserted (but the back-up batteries are inserted), the time display on the display window becomes dim to prevent battery exhaustion.

## 1 Inserting the back-up batteries

Insert three size AA (R6) batteries (not supplied) into the battery compartment. These batteries work to save the memory data.


## Replacing batteries

Take out the batteries as illustrated.


## Tip

When you operate the player on batteries, replace the back-up batteries when the time display dims or when you cannot operate the timer. Replace all the batteries with new ones. With normal use, the back-up batteries should last for about six months. To save the memory data, replace the batteries with the AC power cord connected.

## Note

Before you replace the batteries, be sure to take out the CD from the player.

## 2 Connecting the AC power cord

Insert one end of the supplied AC power cord to the AC IN socket located at the rear of the player, and the other end to the wall outlet.

## 3 Using the player on batteries

Insert six size D (R20) batteries (not supplied) into the battery compartment.
To use the player on batteries, disconnect the AC power cord from the player.


## Replacing batteries

Replace the batteries when the OPR/BATT indicator dims or when the player stops operating. Replace all the batteries with new ones.

## Selecting the audio emphasis (SOUND/MEGA BASS)

You can adjust the audio emphasis of the sound you are listening to.


## Selecting the sound characteristic

Press SOUND repeatedly to select the audio emphasis you want.

| Choose | To get |
| :--- | :--- |
| ROCK | powerful, clean sounds, emphasizing <br> low and high range audio |
| POP | light, bright sounds emphasizing <br> high and middle range audio |
| LIVE | percussive sounds, emphasizing bass <br> audio |
| VOCAL | the presence of vocals, stressing <br> middle range audio |
| OFF | the whole dynamic range for music <br> such as classical music |

## Reinforcing the bass sound

Press MEGA BASS.
"MEGA BASS" appears in the display.
To return to normal sound, press the button again.

## Precautions

## On safety

- As the laser beam used in the CD player section is harmful to the eyes, do not attempt to disassemble the casing. Refer servicing to qualified personnel only.
- Should any solid object or liquid fall into the player, unplug the player, and have it checked by qualified personnel before operating it any further.


## On power sources

- For AC operation, use the supplied AC power cord; do not use any other type.
- The player is not disconnected from the AC power source (mains) as long as it is connected to the wall outlet, even if the player itself has been turned off.
- Unplug the player from the wall outlet when it is not be used for an extended period of time.
- For battery operation, use six size D (R20) batteries.
- When the batteries are not to be used, remove them to avoid damage that can be caused by battery leakage or corrosion.
- The nameplate indicating operating voltage, power consumption, etc. is located at the bottom.


## On placement

- Do not leave the player in a location near heat sources, or in a place subject to direct sunlight, excessive dust or mechanical shock.
- Do not place the player on an inclined or unstable place.
- Do not place anything within 10 mm of the side of the cabinet. The ventilation holes must be unobstructed for the player to operate properly and prolong the life of its components.
- If the player is left in a car parked in the sun, be sure to choose a location in the car where the player will not be subjected to the direct rays of the sun.
- Since a strong magnet is used for the speakers, keep personal credit cards using magnetic coding or springwound watches away from the player to prevent possible damage from the magnet.


## On operation

- If the player is brought directly from a cold to a warm location, or is placed in a very damp room, moisture may condense on the lens inside the CD player section. Should this occur, the player will not operate properly. In this case, remove the CD and wait about an hour for the moisture to evaporate.
- If the player has not been used for a long time, set it in the playback mode to warm it up for a few minutes before inserting a cassette.

If you have any questions or problems concerning your player, please consult your nearest Sony dealer.

## Precautions (continued)

## Notes on CDs

- Before playing, clean the CD with a cleaning cloth. Wipe the CD from the center out.

- Do not use solvents such as benzine, thinner, commercially available cleaners or anti-static spray intended for vinyl LPs.
- Do not expose the CD to direct sunlight or heat sources such as hot air ducts, nor leave it in a car parked in direct sunlight as there can be a considerable rise in temperature inside the car.
- Do not stick paper or sticker on the CD, nor scratch the surface of the CD.
- After playing, store the CD in its case.

If there is a scratch, dirt or fingerprints on the CD , it may cause tracking error.

## Notes on cassettes

- Break off the cassette tab from side A or $B$ to prevent accidental recording. If you want to reuse the tape for recording, cover the broken tab with adhesive tape.


Tab for side B

- The use of a cassette with more than 90 minutes of play time is not recommended except for long, continuous recording or playback.


## Troubleshooting

|  | Symptom | Remedy |
| :---: | :---: | :---: |
| O©U | The power is not on. | - Connect the AC power cord to a wall outlet securely. <br> - Make sure the batteries are inserted correctly. |
|  | The power is not on, and "bAttErY" and "CHECK" are displayed alternately. | - Make sure the batteries are inserted correctly. <br> - Replace all the batteries with new ones if they are weak. |
|  | There is no audio. | - Make sure the function you want to use appears in the display window. <br> - Adjust the volume. <br> - Unplug the headphones when listening through speakers. |
|  | Noise is heard. | - Someone is using a portable telephone or other equipment that emits radio waves near the player. $\rightarrow$ Move the portable telephone, etc., away from the player. |
| 㐫$\stackrel{\text { ® }}{1}$00 | "no diSC" lights in the display even when a CD is in place. | - Insert the CD with the label surface up. |
|  | The CD does not play. | - Make sure that the CD compartment is closed. <br> - Place the CD with the label surface up. <br> - Clean the CD. <br> - Take out the CD and leave the CD compartment open for about an hour to dry moisture condensation. <br> - Make sure "Cd" appears in the display. |
|  | The sound drops out. | - Reduce the volume. |
|  | Noise is heard | - Clean the CD, or replace it if the CD is badly damaged. <br> - Place the player in a location free from vibration. <br> - The sound may drop out or noise may be heard if the CD is recorded using a personal computer (CD-R, etc.) |

## Troubleshooting (continued)

|  | Symptom | Remedy |
| :---: | :---: | :---: |
| 응0 | The audio is weak or has poor quality. | - Replace all the batteries with new ones if they are weak. <br> - Move the player away from the TV. |
|  | The picture of your TV becomes unstable. | - If you are listening to an FM program near the TV with an indoor antenna, move the player away from the TV. |
|  | The tape does not move when you press an operation button. | - Close the tape compartment securely. |
|  | The REC - button does not function/The tape does not play. | - Make sure the safety tab on the cassette is in place. <br> - Make sure "TAPE" appears in the display. |
|  | The tape does not erase completely. | - Clean the erasing head (see page 33). <br> - Replace all the batteries with new ones if they are weak. <br> - The source which was recorded on TYPE II (high position) or TYPE IV (metal) tape using this unit is being played. Record on TYPE I (normal) tape and play. |
|  | The tape does not record. | - Make sure the tape is inserted properly. <br> - Make sure the safety tab of the cassette is in place. |
|  | The audio is weak/The audio quality is poor. <br> The sound is distorted. | - Clean the heads, pinch roller and capstan (see page 33). <br> - Demagnetize the heads using a demagnetizer (see page 33). <br> - The TYPE II (high position) or TYPE IV (metal) tape is being used. Use TYPE I (normal) tape only. |
| 㐫 | The timer does not operate. | - Make sure the time on the clock is correct. <br> - Check to see if the AC power had been cut off. <br> - Make sure the $\oplus$ (clock) indication is displayed. |

After trying the above remedies, if you still have problems, unplug the AC power cord and remove all the batteries. After all the indications in the display disappear, plug the power cord and insert the batteries again. If the problem persists, please consult your nearest Sony dealer.

## Maintenance

## Cleaning the lens

If the lens becomes dirty, it may cause a skipping of sound during CD operation. Clean with a commercially available blower.

## Cleaning the tape heads and tape path

Wipe the heads, the pinch roller and the capstan with a cleaning swab slightly moistened with cleaning fluid or alcohol after every 10 hours of operation for optimum playback and recording quality. To make the best possible recording, however, we recommend that you clean all surfaces over which tape travels before each recording.


## Demagnetizing the tape heads

After 20 to 30 hours of use, enough residual magnetism will have built up on the tape heads to begin to cause loss of high frequency sound and hiss. At this time, you should demagnetize the heads and all metal parts in the tape path with a commercially available tape head demagnetizer.

## Cleaning the cabinet

Clean the cabinet, panel and controls with a soft cloth slightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder, or solvent, such as alcohol or benzine.

After cleaning, insert a tape when the areas cleaned are completely dry.

## Specifications

## AUDIO POWER SPECIFICATIONS

POWER OUTPUT AND TOTAL HARMONIC DISTORTION
With 3.2-ohm loads, both channels driven from $100-10,000 \mathrm{~Hz}$; rated 1.5 W per channel-minimum RMS power, with no more than $10 \%$ total harmonic distortion in AC operation.

## Other Specifications <br> CD player section

System
Compact disc digital audio system
Laser diode properties
Material: GaAlAs
Wave length: 780 nm
Emission duration: Continuous
Laser output: Less than $44.6 \mu \mathrm{~W}$
(This output is the value measured at a distance of about 200 mm from the objective lens surface on the optical pick-up block with 7 mm aperture.)
Spindle speed
$200 \mathrm{r} / \mathrm{min}(\mathrm{rpm})$ to $500 \mathrm{r} / \mathrm{min}(\mathrm{rpm})$ (CLV)
Number of channels
2
Frequency response
$20-20,000 \mathrm{~Hz}+0 /-0.5 \mathrm{~dB}$
Wow and flutter
Below measurable limit

## Radio section

Frequency range
FM: 87.6-108 MHz
AM: 530-1,710 kHz
Aerials
FM: Telescopic aerial
AM: Built-in ferrite bar aerial

## Cassette-corder section

Recording system
4-track 2 channel stereo
Fast winding time
Approx. 120 sec. with Sony cassette C-60
Frequency response
TYPE I (normal): 70-13,000 Hz

## General

Speaker
Full range: $8 \mathrm{~cm}\left(3^{1 / 4} \mathrm{in}\right.$.) dia., 3.2 ohms, cone type (2)

Outputs
Headphones jack (stereo minijack)
For 16-68 ohms impedance headphones
Power output (excluding for US model)
$2 \mathrm{~W}+2 \mathrm{~W}$ (at 3.2 ohms, $10 \%$ harmonic distortion
in AC operation)
Power requirements
For CD radio cassette-corder:
$120 \mathrm{~V} \mathrm{AC}, 60 \mathrm{~Hz}$
9 V DC, 6 size D (R20) batteries
For memory back-up:
4.5 V DC, 3 size AA (R6) batteries

Power consumption

## AC 17 W

Battery life
For CD radio cassette-corder:

## FM recording

Sony manganese SUM-1 (N): approx. 9 h
Sony alkaline AM-1 (N): approx. 19 h

## Tape playback

Sony manganese SUM-1 (N): approx. 5 h
Sony alkaline AM-1 (N): approx. 14 h
CD playback
Sony manganese SUM-1 (N): approx. 1.5 h
Sony alkaline AM-1 (N) : approx. 7 h

Dimensions
Approx. $304 \times 169 \times 262 \mathrm{~mm}(\mathrm{w} / \mathrm{h} / \mathrm{d})$
( $12 \times 6^{3 / 4} \times 10^{3 / 8}$ inches) (incl. projecting parts)
Mass
Approx. 3.6 kg ( 7 lb .15 oz ) (incl. batteries)
Supplied accessories
AC power cord (1)
Design and specifications are subject to change without notice.

## Optional accessories

Sony MDR headphones series

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